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Source / Izvornik: **Archives of Psychiatry Research : An International Journal of Psychiatry and Related Sciences, 2022, 58, 43 - 50**

Journal article, Published version
Rad u časopisu, Objavljena verzija rada (izdavačev PDF)

https://doi.org/10.20471/may.2022.58.01.05

Permanent link / Trajna poveznica: https://urn.nsk.hr/urn:nbn:hr:184:702660

Original paper

Archives of Psychiatry Research 2022;58:43-50
DOI:10.20471/may.2022.58.01.05
Received March 19, 2021, accepted after revision November 07, 2021

Effects of Psychoeducation on Treatment Satisfaction in Schizophrenic Patients on Olanzapine Long Acting Injection

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Abstract - Healthcare decisions may have life-changing consequences which are even more important in schizophrenia treatment programs. In this study, we hypothesized that there is a significant difference in treatment satisfaction among patients after completing the one-year psychoeducation program. We expected a higher overall treatment satisfaction among 19 schizophrenic patients on olanzapine long acting injection after completing the one-year psychoeducation program. Results showed that there is no difference in treatment satisfaction among patients after completing the psychoeducational program. However, the additional analysis did elicit a statistically significant change in treatment satisfaction before and after enrolling in the olanzapine long acting program. Patients reported a significantly higher treatment satisfaction after enrolling in the olanzapine long acting injection program than before, previous to completing the psychoeducational program, as well as after the program completion. We concluded that the patient's treatment satisfaction with the psychoeducative program achieved a constant high value even after a year of enrolling. A high treatment satisfaction shows that this type of therapy has a great potential in providing a more successful positive outcome in the treatment of schizophrenic patients, and it should be considered as a crucial part of patient care and treatment.

Keywords: psychoeducation; schizophrenia; treatment satisfaction; olanzapine long acting

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Introduction

Healthcare decisions may have life-changing consequences what makes getting the right information to patients a priority. This is even more important in schizophrenia treatment programs. Schizophrenia is characterized by patients' impairment of insight or „lack of insight", inconsistency of treatment, and poor prognosis. Nonetheless, research shows that patients with schizophrenia benefit a lot from learning about their illness. Cochrane analysis of schizophrenia psychoeducation showed that psychoeducational interventions significantly lowered the relapse and readmission rates and the average length of stay, increased adherence to medication and satisfaction with mental health services, and improved quality of life [1]. According to the American Psychiatric Association's (APA) treatment guidelines, psychoeducational interventions should

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be part of standard therapy for patients with schizophrenia [2]. Psychoeducation fosters a common professional-patient decision-making approach that combines clinical expertise and the patient's treatment preferences. Joint decision-making encourages autonomy, resulting in decisions according to the individual's choices, values and interests [3].

Psychoeducation is an evidence-based psychotherapeutic intervention for patients with mental illness and their families. It teaches patients and their families about the nature of the disease, how to treat it, how to cope and manage it, and the skills needed to avoid relapse. Psychological education is defined as the „education of a person with a psychiatric disorder in subject areas that serve the goals of treatment and rehabilitation" [1]. Psychoeducation can be offered to patients, family members, or both. The results of a study from more than 30 randomized clinical trials showed a reduced relapse rate, improved recovery, and improved family well-being. Effective family psychoeducation includes empathic engagement, problem solving and communication skills, social networking, clinical resource education, and ongoing supportive activities [4].

Poor medication adherence is an often neglected but serious public health problem. "Lack of medication adherence is one of the biggest U.S. drug problems and may lead to unnecessary disease progression, reduced functional abilities, disease complications, lower quality of life, and even death". It is estimated that only 50% of patients usually take medications as prescribed. There is a growing awareness that a multidisciplinary approach to medication-taking behavior is needed. The National Patient Information and Education Council (NCPIE) recommends a "medication education team" in which the patient and all members of the healthcare team work together to treat the patient's condition while recognizing the patient's key role at the heart of the process. Psychoeducation can be provided at all levels of care and treatment (e.g., inpatient, outpatient, private practice, day treatment (partial hospitalization)) to groups or individuals. It can be provided by a variety of professionals and non-professionals, including psychologists, psychiatrists, social workers, nurses, trained family members, and peer professionals. Group or individual therapy sessions may contain a psychoeducational component. A typical psychoeducation group lasts an hour, is held about 2 times a week, and usually consists of 4 to 20 sessions. On the other hand, this form can vary greatly depending on the psychoeducation program, the needs of the patients, and the type of institution [5].

In this study, we hypothesized that there is a significant difference in treatment satisfaction among patients after completing the one-year psychoeducation program. We expected a higher overall treatment satisfaction among schizophrenic patients on olanzapine long acting injection after completing the one-year psychoeducation program.

Subjects and Methods

Statistical analysis and methodology

Our sample consisted of 19 schizophrenic patients treated with olanzapine long acting injection. All of the patients were included in group sociotherapy sessions and completed the 12-month psychoeducational program. Olanzapine long acting injection was administered once a month for most of the 19 patients followed by a monthly psychoeducation session. All patients followed the treatment and administration schedule. Participants were asked to answer three sets of questions before and after completing the one-year psychoeducational program: a) socio-demographic data – consisting of 9 questions; b) information related to the disorder/condition and treatment – 6 questions; c) treatment satisfaction survey consisting of 9 questions on a 10-point Likert scale.

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The research ethics committee of The Clinical Hospital Centre of Rijeka (Clinical Hospital Centre Rijeka ethics committee / Etičko povjerenstvo kliničkog bolničkog centra Rijeka) approved this study and it was ensured that the research was in accordance with

the relevant ethical standards. All participants gave their formal consent to participate and were properly informed with the aim of this study. The gathered data was analyzed using IBM SPSS Statistics for Windows, Version 21.0.

Results

The basic demographic data of the sample is shown in Table 1, while the descriptive data is included in Table 2. showing median and interquartile range (IQR) of the overall and point-by-point treatment satisfaction survey among schizophrenic patients.

A series of Wilcoxon Signed-Rank Tests were conducted to test for differences in treatment satisfaction before and after enrolling in the psychoeducational program. Results did not show a statistically significant change in the level of overall and point-by-point treatment satisfaction within-subjects in two measurements: before and after the completion of the one-year psychoeducational program. Data regarding the conducted tests are shown in Table 3.

However, additional analysis of data showed that schizophrenic patients enrolled in the olanzapine long acting injection program reported high levels of treatment satisfaction before and after the completion of the one-year psychoeducational program. Two additional Wilcoxon Signed-Rank Tests were conducted and results did elicit a statistically significant change in treatment satisfaction before and after enrolling in the olanzapine long acting injection program, both before ($Z = -2.93$, $p < 0.01$) and after ($Z = -3.07$, $p < 0.01$) completing the one-year psychoeducational program. Patients reported a significantly higher treatment satisfaction after enrolling in the olanzapine long acting program ($M_1 = 10.00$, $IQR_1 = 8.00 – 10.00$) than before ($M_2 = 7.00$, $IQR_2 = 2.50 – 8.50$) previous to completing the psychoeducational program, as well as after the completion of the program ($M_3 = 10.00$, $IQR = 8.00 – 10.00$; $M_4 = 5.50$, $IQR = 3.00 – 10.00$). The results are also shown in Table 4.

Table 1. Descriptive and basic demographic data of the sample.

	Sample (N = 19)
Sex	
M:F	6:13
M %	31.6%
Age in years	
M ± SD	46 ± 12.64
Range	25-66
Highest level of education:	
Elementary school	1 (5%)
High school	13 (70%)
Bachelor's degree	3 (15%)
Master's degree or higher	2 (10%)
Occupational status:	
Employed	7 (36.8%)
Unemployed	5 (26.3%)
Retired	6 (31.6%)
Student	1 (5,3%)
Marital status:	
Married	3 (15,8%)
Domestic partnership	1 (5,3%)
Single	13 (68,3%)
Divorced	1 (5,3%)
N/A	1 (5,3%)
Mental illness among family members:	
Yes	11 (57,9%)
No	8 (42,1%)
Treatment Duration:	
1 year	4 (21,1%)
4 years	1 (5,3%)
5 years or more	14 (73,6%)

Also, overall and point-by-point treatment satisfaction scores were high. Even the lowest median score was arguably high showing that all patients were, in fact, very satisfied with this

Table 2. Median and interquartile range (IQR) of the overall and point-by-point treatment satisfaction survey among schizophrenic patients before and after completing the one-year psychoeducational program.

Treatment satisfaction (point-by-point/overall)	Before/after completing the psychoeducational program	
	Before PP Median (IQR)	After PP Median (IQR)
Treatment satisfaction after enrolling in the olanzapine program	10.00 (8.00 – 10.00)	10.00 (8.00 – 10.00)
Treatment satisfaction before enrolling in the olanzapine program	7.00 (2.50 – 8.50)	5.50 (3.00 – 10.00)
Therapy medications satisfaction	9.50 (7.75 – 10.00)	9.00 (7.00 – 10.00)
Doctor's visit/ward round satisfaction	10.00 (8.00 – 10.00)	10.00 (9.00 – 10.00)
Socio-therapy group satisfaction	10.00 (8.75 – 10.00)	10.00 (9.00 – 10.00)
Group members/peer support satisfaction	10.00 (8.00 – 10.00)	10.00 (8.00 – 10.00)
Satisfaction with healthcare workers compassion	10.00 (10.00 – 10.00)	10.00 (9.75 – 10.00)
Satisfaction with participation in the program	10.00 (8.00 – 10.00)	10.00 (8.00 –10.00)
Satisfaction with health condition after enrolling in the program	8.00 (7.00 – 10.00)	9.00 (7.75 – 10.00)
Overall treatment satisfaction	73.50 (66.75 – 77.00)	75.50 (62.50 – 78.75)

Table 3. Data showing differences in treatment satisfaction before and after completing the one-year psychoeducational program.

Treatment satisfaction (point-by-point/overall)	Z	p
Treatment satisfaction after enrolling in the olanzapine long acting program	0.00	1.00
Treatment satisfaction before enrolling in the olanzapine long acting program	-0.59	0.55
Therapy medications satisfaction	-0.34	0.73
Doctor's visit/ward round satisfaction	-1.39	0.16
Socio-therapy group satisfaction	-0.79	0.43
Group members/peer support satisfaction	-0.10	0.92
Satisfaction with healthcare workers compassion	-0.36	0.71
Satisfaction with participation in the program	-0.06	0.95
Satisfaction with health condition after enrolling in the program	-1.04	0.30
Overall treatment satisfaction	-0.06	0.95

Table 4. Data showing differences in treatment satisfaction before and after enrolling in the olanzapine long acting injection program.

Treatment satisfaction	Z	p
Treatment satisfaction before completing the one-year psychoeducational program	-2.93	0.003
Treatment satisfaction after completing the one-year psychoeducational program	-3.07	0.002

form of treatment when compared with different types of treatment they were enrolled in before the psychoeducational program. High scores were reported by patients both at the beginning and after the completion of the program, which shows a constant higher treatment satisfaction.

Discussion

There are many studies about the effects of psychoeducation on the frequency of hospitalizations and prevention of re-hospitalization [6-8]. One study showed that even schizophrenic patients with a lower level of intelligence may benefit from psychoeducation and its positive effects on reducing rehospitalizations. However, there is a smaller number of studies that evaluated patient's satisfaction with a psychoeducational program in schizophrenic patients. Our results show that there is no significant difference in treatment satisfaction among schizophrenic patients before and after the one-year psychoeducational program. A study conducted by Lam, Leung, Lin, and Chien on the emotion regulation of patients with schizophrenia tested the effectiveness of a Mindfulness-Based Psychoeducation Programme (MBPP) to access emotion regulation strategies [9]. Results showed the MBPP group achieved a significant improvement in reappraisal at a three-month follow-up but showed no significant difference in rumination and expressive suppression contrary to the authors' hypotheses. These findings show that there is a possibility that more time is needed for evoking significant changes in patients' emotion regulation strategies as well as for making other improvements in patients' quality of life or symptom management following a psychoeducational program. Although there were no statistically significant differences in overall or point-by-point treatment satisfaction, there was a significant positive difference in treatment satisfaction after entering the olanzapine long acting injection program (which included a psychoeducation program) when compared to previous treatments both in the first and second measurement. This result may go hand in hand with the research of positive indicators in terms of better treatment outcome, greater attention, and greater satisfaction with health services in schizophrenic patients who were included in this type of therapy [10]. Regular follow-ups, continuous patient care monitoring, and treatment evaluation are important factors in estimating the impact of psychoeducation on patient treatment satisfaction and its positive effects on mental status, medication adherence, and illness insight even after a longer period of treatment (e.g. one year), which is also shown in available literature [11]. Furthermore, other studies reported that psychoeducation may be an effective approach in maintaining medication adherence which plays a very important role in the treatment of schizophrenic patients [12]. Our patients, even though they are on the long acting medication, have a constant need for motivation to continue with the treatment. This can be achieved with psychoeducation programs during treatment which was shown in the study of authors whose patients were also on the long acting medication [13]. Some studies clearly show the

importance of psychoeducation in patients on atypical long-acting drugs; the medication treatment enables the application of psychosocial interventions and thus can further increase patient satisfaction and ultimately improve long-term outcomes in the treatment of schizophrenia [14]. Our results demonstrated a high treatment satisfaction score showing that all patients were satisfied with the treatment when compared with different types of treatment they were enrolled in before the psychoeducational program. Results of this study partly coincide with the results of a study that investigated patients' expectations before participating in education and their evaluation after completing the education. Patients stated that the most effective part was learning about medication and diagnosis [15], which is was a part of the program in our psychoeducative groups. There is an interesting study that points to differences in the effectiveness of psychoeducation and music therapy when these two types of treatment are applied. Results showed a combined positive effect on cognitive functions in schizophrenic patients when compared to psychoeducational treatment alone [16]. This should be noted for future research with clear clinical and therapeutic implications which may almost certainly further improve patient satisfaction with the psychoeducational program. There are some limitations of this study which should be taken into account for future research. Participants could complete the treatment satisfaction survey at different stages of psychoeducational program, for example once before the beginning of the program, half-way during the program (after six months) and after completion of the education (after one year). This could more clearly show changes in treatment satistaction of patients enrolled in the program. Also, more participants are needed for a greater sample size and more detailed analysis of data. Another way of improving future studies could be the use of different research designes with the goal of achieving comparable groups enrolled in different psychoeducational programs as well as in other comparable programs with a more detailed survey or questionnaire.

Following the obtained results from our study, we conclude that the patient's treatment satisfaction with the psychoeducative program achieved a constant high value even after a year of enrolling. However, our results did not confirm our hypotheses that there is a significant difference in treatment satisfaction among patients after completing the one-year psychoeducation program. We expected a higher overall treatment satisfaction among schizophrenic patients on olanzapine long acting injectable treatment after completing the one-year psychoeducation program. This was not confirmed. On the other hand, a high treatment satisfaction shows that this type of therapy has a great potential in providing a more successful positive outcome in the treatment of schizophrenic patients, and it should be considered as a crucial part of patient care and treatment. In the future, more quality content can be added in psychoeducational programs to gain even a higher score in patients' treatment satisfaction that will last many years after enrolling in the program.

Acknowledgements

None.

Conflict of interest

None to declare.

Funding Sources

None.

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Učinci psihoedukacije na zadovoljstvo tretmanom u oboljelih od shizofrenije liječenih dugodjelujućim olanzapinom

Sažetak – Odluke o zdravstvenoj skrbi mogu imati posljedice koje mijenjaju život, koje su još važnije u programima liječenja shizofrenije. U ovoj smo studiji pretpostavili da postoji značajna razlika u zadovoljstvu tretmanom među pacijentima nakon završetka jednogodišnjeg programa psihoedukacije. Očekivali smo veće cjelokupno zadovoljstvo liječenjem među 19 pacijenata sa shizofrenijom liječenih dugodjelujućim olanzapinom nakon završetka jednogodišnjeg programa psihoedukacije. Rezultati su pokazali da nema razlike u zadovoljstvu tretmanom pacijenata nakon završetka psihoedukativnog programa. Međutim, dodatna analiza je pokazala statistički značajnu promjenu u zadovoljstvu tretmanom prije i nakon uključenja u program liječenja dugodjelujućim olanzapinom. Bolesnici su izvijestili o značajno većem zadovoljstvu tretmanom nakon upisa u program liječenja dugodjelujućim olanzapinom nego prije završetka psihoedukativnog programa, kao i nakon završetka programa. Zaključili smo da je zadovoljstvo pacijenata psihoedukativnim programom i nakon godinu dana od upisa u program postiglo konstantno visoku vrijednost. Visoko zadovoljstvo liječenjem pokazuje da ova vrsta terapije ima veliki potencijal u pružanju uspješnijeg pozitivnog ishoda u liječenju bolesnika sa shizofrenijom te je treba smatrati ključnim dijelom skrbi i liječenja bolesnika.

Ključne riječi: psihoedukacija; shizofrenija; zadovoljstvo tretmanom; dugodjelujući olanzapin